

Amendments to the Claims

1-9. (Canceled)

10. (Currently amended) A method of plasma etching a wafer, said method comprising:

coupling a chuck, the chuck containing a plurality of slots on its face, to a rotatable pedestal, the pedestal comprising a central bore having disposed therein a central hollow shaft for communicating a gaseous coolant, the chuck and the pedestal cooperating to define a coolant chamber for receiving and maintaining the gaseous coolant from the hollow shaft;

coupling the wafer to the chuck;

rotating the pedestal so as to rotate the coupled wafer; ~~and~~

plasma etching the rotating wafer while cooling the chuck by communicating the gaseous coolant through the hollow shaft to the coolant chamber, and maintaining the gaseous coolant in the coolant chamber; and

expelling the gaseous coolant through said slots.

11. (Canceled)

12. (Canceled)

13. (Currently amended) The method of claim 10 ~~wherein~~ further comprising
the step of vertically moving the central hollow shaft ~~is capable of moving vertically~~
between a wafer unloading position and a wafer clamping position.

14. (Previously amended) The method of claim 10 wherein the step of coupling
the wafer to the chuck comprises coupling with an electrostatic clamp.

15. (Previously amended) The method of claim 10 further comprising the step
of initializing process parameters, the process parameters comprising gas flow, process
chamber pressure, wafer temperature, and pedestal rotation speed.

16. (Currently amended) The method of claim 10 further comprising the step of
unloading the wafer from the chuck after plasma etching, the unloading step
comprising the steps of:

providing a lift actuator coupled to a ~~push rod~~ the hollow shaft and a spider
system; and

actuating the lift actuator, the ~~push rod~~ hollow shaft pushing the spider system to move the wafer away from the chuck in response to actuation of the lift actuator.

17-25. (Canceled)

26. (Currently amended) A method of plasma etching a wafer by means of a plasma etching machine comprising a process chamber, a rotatable, internally cooled chuck disposed in the process chamber, a clamp coupled to the chuck; ~~a controller coupled to the process chamber and chuck for controlling gas flow and pressure in the process chamber and rotation of the chuck;~~ a pedestal coupled to the chuck and cooperating therewith to define a coolant chamber for receiving and maintaining a gaseous coolant, the pedestal comprising a central coolant passage for communicating the gaseous coolant to the coolant chamber; ~~and a lift actuator~~ mechanism coupled to the coolant passage, the coolant passage moving in the pedestal in response to actuation of the lift mechanism to lift the wafer from the chuck; and a controller coupled to the process chamber and chuck for controlling gas flow and pressure in the process chamber, rotation of the chuck, and actuation of the lift mechanism, said method comprising the steps of:

coupling the chuck to the pedestal;

coupling the wafer to the coupled chuck;

rotating the pedestal so as to rotate the coupled chuck and the coupled wafer;
and

plasma etching the rotating wafer while cooling the chuck by communicating
the gaseous coolant through the coolant passage to the coolant chamber, and
maintaining the gaseous coolant in the coolant chamber; and

expelling the gaseous coolant through a plurality of slots on the face of the
chuck.